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Your attention is invited.

**NEWS
OF THE
ENGINEERING
MECHANICS
DIVISION
OF
ASCE**



**JOURNAL OF THE ENGINEERING MECHANICS DIVISION
PROCEEDINGS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS**



DIVISION ACTIVITIES

ENGINEERING MECHANICS DIVISION

Proceedings of the American Society of Civil Engineers

NEWS

April, 1961

CHAIRMAN'S ANNOUNCEMENTS

It is a pleasure for me as Chairman to report to the members of EMD on the current activities of your Division. As you know, throughout the year there is much work which is done by our technical and administrative committees. The following items may be of general interest:

1. Under the Chairmanship of Dr. Haltiwanger, our Committee on Structural Dynamics held a two day meeting in January, 1961. At this meeting final editing of the forthcoming manual on "Design of Structures to Resist Nuclear Weapons Effect" took place. It is expected that this manual will be available in June. An order coupon will appear in CIVIL ENGINEERING.

2. Late in January, 1961, a meeting of the Division's technical committee on Mechanical Properties of Materials was held in Chicago. Professors J. F. Throop and M. J. Gutzwiller are the committee's chairman and secretary, respectively. At the meeting, plans for a symposium on the "Teaching of Materials in Civil Engineering" were discussed. This symposium is to be presented at the 1961 Annual Meeting and will be co-sponsored by the Structural Division.

Plans for future symposia on "Brittle Fracture" in 1962 and on "Behavior of Materials Under Shock Loading" in 1963 were considered.

3. For March 24, 1961, a special meeting of the EMD's Committee on Research was authorized. This committee, under the Chairmanship of Dr. R. J. Hansen, met to discuss the ways and means of advancing and accelerating research activity in mechanics in ASCE.

4. On March 25, 1961, the Executive, Program, and Publications Committees met at 33 West Grand Avenue, Chicago, in the offices at PCA. A crowded agenda was prepared for this meeting; a report to EMD members will follow in due time.

5. Again this spring, on May 18 and 19, 1961, EMD will sponsor an ASCE Engineering Mechanics Division conference. It will be held at the Rensselaer Polytechnic Institute, Troy, New York. The program for this conference is virtually complete. Details of program and reservation procedure are given

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in this Newsletter. Professor M. R. Brown, Jr. is making the detailed arrangements for this conference. An advance-registration form appears at the end of this Newsletter.

6. This year EMD's West Coast Committee is scheduling a joint conference with ASME's Applied Mechanics Division in Seattle, Washington. The conference will be held on the 28th, 29th, and 30th of August, 1961; and the program will be announced when developed. Dr. B. J. Hartz is the Chairman and Dr. K. S. Pister is the Secretary of this committee.

Your support of all EMD's committees is urged and solicited. Please feel free to write to any one of the chairmen or secretaries of any of your committees to make your views known. More detailed information is contained on several of the above announcements in separate news items to follow.

E. P. Popov, Chairman
EMD Executive Committee

ENGINEERING MECHANICS CONFERENCE AT RENSSELAER

The Mohawk-Hudson Section of ASCE will sponsor an Engineering Mechanics Division Conference at Rensselaer Polytechnic Institute on May 18th and 19th, 1961. This will be the second conference of its kind, the first held last year at Purdue University. The following information was selected from the preliminary program submitted for the second EMD Conference. Registration will be in the Troy Building on Thursday, May 18th from 9:00 a.m. to 5:00 p.m. and on Friday, May 19th from 8:00 a.m. to 12:00 noon. Registration fee is \$5.00 for members and \$1.00 for students, no charge for the ladies. Advance registration is requested in order that information on parking, etc., may be forwarded. Authors Breakfasts 8:00 a.m., Thursday, May 18 and 7:30 a.m., Friday, May 19 in the Hendrick Hudson Hotel, J. F. Throop presiding.

THURSDAY MORNING SCHEDULE

May 18, Room 101, Troy Building

Topic: Experimental Stress Analysis, F. L. Ryder presiding.

Greetings by C. O. Dohrenwend, "An Electrical Analog Computer for Limit Design of Structures" by M. Zaid and F. L. Ryder. Paper No. 2, "Moire Fringes as a Means of Analyzing Strains" by A. J. Durelli and C. A. Sciammarella.

THURSDAY AFTERNOON SCHEDULE

May 18, Room 101, Troy Building

Topic: Elastic and Plastic Analysis, E.C.W.A. Geuze presiding.

Paper No. 1, "Plastic Bending of Metals Considering True Stresses and True Strains" by O. G. DePineres and J. Marin. Paper No. 2, "The Contact Problem for an Elliptical Punch" by R. L. Schiffman and B. D. Aggarwala. Paper No. 3, "Elasto-Plastic Analysis by Numerical Procedures" by A. L. Tong. Paper No. 4, "Thermally Induced Buckling of Cruciform Bars and Circular Rings" by J. E. Goldberg.

CONFERENCE BANQUET

Thursday Evening, May 18, Ballroom, Hendrick Hudson Hotel
6:00 - 7:00 p.m. social hour, 7:00 p.m. banquet.

Speaker: William H. Hoppmann, II.

Topic: Dead Sea Scrolls

FRIDAY MORNING SCHEDULE

May 19, Room 101, Troy Building

Topic: Dynamic Analysis, M. P. White presiding.

Paper No. 1, "Analysis of Beams with Bi-linear Hysteresis" by R. K. Wen.

Paper No. 2, "End-Fixity Effect on Vibration and Instability" by D. Burgreen.

Paper No. 3, "Vibration of Shear Buildings by Flexibility Analysis" by M. L.

Pei. Paper No. 4, "Response of Multi-Story Structures to Earthquake" by G. V. Berg.

FRIDAY AFTERNOON SCHEDULE

May 19, Room 101, Troy Building

Topic: Shells, Domes, and Plates, E. A. Saibel presiding.

Paper No. 1, "On the Optimum Design of Circular Plates" by I. G. Tadjbakhsh.

Paper No. 2, "Wind Stresses in Domes," by P. Gondikas and M. G. Salvadori.

Paper No. 3, "On the Plastic Analysis of Shallow Conical Shells" by E. T. Onat.

Conference arrangements are being made by Martin R. Brown, Jr., Assistant Professor, Department of Civil Engineering, Rensselaer Polytechnic Institute, Troy, New York.

AGENDA FOR EMD MEETING

The Agenda for the Officer's meeting held in Chicago on March 25, 1961 and referred to in the announcements by the chairmen was as follows:

Breakfast and Executive Committee Meeting

1. Secretary's report on Division activities.
2. Policy on Divisional structure.
3. New appointments to Executive Committee.
4. Budget preparation.
5. Items for discussion by the Committee on Technical Procedure.
6. NSF sponsored tours by European specialists.
7. Expansion of activities of the Mathematical Methods Committee (random vibrations and computers).
8. Policy on special interest meetings and plans for next meeting of Executive Committee.
9. Divisional Awards.
10. ASCE participation in International Union of Theoretical and Applied Mechanics.

Program Committee Meeting

1. Report on RPI meeting.
2. Report on West Coast meeting.
3. Plans for annual meeting in 1961.
4. Plans for special EMD meeting at the University of Texas in 1962.
5. Plans for annual meeting in 1962.
6. Joint meeting with ACI.

7. Joint sessions with Structural Division.
8. Policy on selection of papers for meetings.
9. Newsletter announcements.

Publications Committee Meeting

1. Report on submission, acceptance, rejection, and withdrawal of papers.
2. Review of publication policy and procedure.
3. Report on the status of the two outstanding engineering manuals of practice.
4. Report on the status of the Technical Division Handbook.
5. Review of Technical Committee reports.
6. Suggestions and improvements.

General Session

1. Consideration of new Division committee members.
2. Preparation of annual budget.
3. Preparation of annual report.
4. New items of interest to the Division.
5. General discussion.

MPM COMMITTEE TO CO-SPONSOR SESSION AT ANNUAL MEETING

Mr. J. F. Throop, Chairman of EMD's Committee on Mechanical Properties of Materials announces that his committee has arranged to co-sponsor with the Structural Division a joint symposium Tuesday morning on the Teaching of Materials. The tentative schedule for the program is:

1. Keynote Address: "The Significant Aspects of Materials Behavior."
2. Discussion of Keynote Address.
3. Education in Materials: Macroscopic Approach; Microscopic Approach; Combination of Macroscopic and Microscopic Approach.
4. General Discussion.

The arrangements for speakers are being made by C. E. Kesler, Talbot Laboratory, U. of Ill., Urbana.

1961 WEST COAST CONFERENCE OF APPLIED MECHANICS

K. S. Pister, Secretary of the Division's West Coast Committee, has issued an advance announcement of the above conference to be held at the University of Washington in Seattle August 28th through 30th, 1961. This conference sponsored jointly by the Applied Mechanics Division of ASME and Engineering Mechanics Division of ASCE has the following stated purpose: The purpose of the Conference is to promote presentation and discussion of information and original research in the field of Applied Mechanics, including the subjects of Linear and Nonlinear Dynamics, Vibration, Wave Propagation, Elasticity, Plasticity, Viscoelasticity and Properties of Materials, and also to provide an opportunity for acquaintance among those interested in these fields. Invited general lectures by recognized authorities in Applied Mechanics will be a feature of the program.

The deadline for manuscripts intended for sponsorship by ASCE was March 15, 1961. B. J. Hartz, Department of Civil Engineering, University of Washington is handling the ASCE manuscripts.

TRANSLATIONS OF RUSSIAN EARTHQUAKE PAPERS AVAILABLE

G. V. Berg has suggested that the following announcement would be of general interest to the EMD members.

Translations in Earthquake Engineering, by the Earthquake Engineering Research Institute under a grant from the National Science Foundation.

This group of translations is entirely from recent publications in the Russian language and consists of seven papers dealing with various facets of engineering seismology, together with the detailed USSR Standards and Regulations for Building in Seismic Regions.

The seven papers are as follows:

The Fundamental Premises of the Dynamic Theory of Seismic Resistance

A Method of Designing Buildings for Seismic Forces

The Design of Flexible Structures for Seismic Loads

A Simplified Method for Earthquake Resistant Design of Structures

On the Interaction Between Masonry Filler Walls and Enclosing Frame When Loaded in the Plane of the Wall

Certain Design Problems of Reinforced Concrete Frame Structures for Seismic Regions

Vibration of Tall Buildings

These translations will give the reader an insight into both the theoretical and applied aspects of earthquake engineering in the USSR, and will likewise indicate the increasing work being done by their scientists and engineers.

The book will prove both useful and interesting to all concerned with recent developments in engineering seismology.

x plus 150 pages, 7" by 10-1/2"

Paperbound: \$3.25

Clothbound: \$5.00

Available through Earthquake Engineering Research Institute, P. O. Box 85, Berkeley 1, California.

ITEMS FOR JUNE 1961 NEWSLETTER

News items and comments to be considered for publication in the Newsletter for circulation with the June, 1961 EMD Journal must be on your Editor's desk by Wednesday, May 3, 1961.

Donald L. Dean
Newsletter Editor EMD
Department of Civil Engineering
University of Delaware
Newark, Delaware

CUMULATIVE INDEX TO ASCE PUBLICATIONS

A three-part index to Proceedings, Transactions, and CIVIL ENGINEERING is now available. This 816-page, 6 in. by 9 in., blue cloth bound book contains

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a subject and name index for CIVIL ENGINEERING that covers the magazine since its inception in 1930 through 1959. For Proceedings, the coverage is from 1950 through 1959, a period in which most papers were not included in Transactions. The 1935 through 1959 Transactions are indexed to provide a valuable source of reference to "modern" technical civil engineering literature.

The list price for this volume is \$20.00. Members of ASCE and public and school libraries are entitled to a 50% discount and will, therefore, pay \$10.00 per volume.

Order your copy of this INDEX by use of the coupon herewith.

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AMERICAN SOCIETY OF CIVIL ENGINEERS

Engineering Mechanics Division Conference
May 18-19, 1961 Troy, N.Y.
Advance Registration

Name (please print): _____

Address: _____

Plan to attend: Thursday luncheon _____
Thursday banquet _____
Friday luncheon _____

Send additional information on hotels _____ motels _____.

Please mail to: EMD Conf. Comm., Dept. of Civil Eng., R.P.I., Troy, N. Y.
by May 10, 1961

Please do not send prepayment.

ASCE

Engineering Mechanics Division

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AMERICAN SOCIETY OF CIVIL ENGINEERS

EMD Conference, Troy, N. Y., May 18-19, 1961

Mail to: Hendrick Hudson Hotel, Troy, N. Y.

Please reserve the following accommodations for me:

Double Bedroom	\$10	\$11	\$12
Twin Bedroom	\$11	\$12	\$13
Single Bedroom	\$7	\$8	\$8.75

Date and hour of arrival _____

Date of departure _____

Name (please print): _____

Address: _____
